

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Amend claims 1-3 and 5, as follows.

**Listing of Claims:**

1. **(Currently Amended)** A method for performing multi-counter evaluation of a text, said method comprising computer-implemented steps of:

applying to the text a merged finite-state machine representing a plurality of single-counter finite-state machines each representing a different one of a plurality of counters and wherein at least one state of the merged finite-state machine each corresponds to a multiplicity of states each of a different one of said single-counter finite-state machines, augmented with state value lists where each state value list indicates which counter of the multi-counter receives which value for the state of the merged finite-state machine, wherein at least one of the state value lists indicates a value for at least two of the plurality of counters;

accumulating the values of the states of the merged finite-state machine separately for each counter of the multi-counter, thereby producing a list of counter scores; and  
updating each counter with its counter score.

2. **(Currently Amended)** A method for performing multi-counter evaluation of a text, said method comprising computer-implemented steps of:

applying to the text a merged finite-state machine representing a plurality of single-counter finite-state machines each representing a different one of a plurality of counters and wherein at least one state of the merged finite-state machine each corresponds to a multiplicity of states each of a different one of said single-counter finite-state machines, augmented with state value lists where each state value list indicates which patterns in which counters of the multi-counter are found when the state of the merged finite-state machine is entered, wherein at least one of the state value lists indicates a pattern value for at least two of the plurality of counters;

producing a list of patterns for each counter; and  
updating each counter with its list of patterns.

3. **(Currently Amended)** A method for constructing a multi-counter finite-state machine augmented with state value lists, said method comprising the computer-implemented steps of:

providing by computer an empty augmented finite-state machine that has only a start state, with no transitions and no value list;

accumulating by computer a finite-state machine of each counter of the multi-counter that corresponds to one or more pattern-amount pairs into the augmented finite-state machine to form a merged machine representing a plurality of single-counter finite-state machines each representing a different one of a plurality of counters and wherein at least one state of the merged finite-state machine each corresponds to a multiplicity of states each of a different one of said single-counter finite-state machines, including

converting state values of states of the finite-state machines of the counters of the multi-counter into state-value lists of states of the merged machine, wherein at least one of the state value lists indicates a pattern value for at least two of the plurality of counters, and

updating the merged machine with the state-value lists.

4. **(Previously Presented)** The method of claim 3, wherein the step of accumulating a finite-state machine of each counter of the multi-counter that corresponds to one or more pattern-amount pairs into the augmented finite-state machine to form a merged machine comprises computer-implemented steps of:

forming states for the merged machine that correspond to pairs of states that can be reached by starting the finite-state machine of a counter of the multi-counter and the augmented finite-state machine in their start states and applying the finite-state machine of the counter and the augmented finite-state machine to a text in unison, with the finite-state machine of the counter and the augmented finite-state machine advancing through each text character simultaneously;

forming states for the merged machine that correspond to one of the finite-state machine of the counter and the augmented finite-state machine having halted while another of the finite-state machine of the counter and the augmented finite-state machine continues to advance through the text;

for each merged machine state, if there is a corresponding state of the augmented finite-state machine of the counter and it has a value list, then copying the value list to form the value list for the merged machine state;

for each merged machine state, if there is a corresponding state of the finite-state machine of the counter, it has a value, and the merged machine state has no value list, then forming a new empty value list for the merged machine state;

for each merged machine state, if there is the corresponding state of the finite-state machine of the counter and it has a value, then adding a reference to the counter corresponding to the finite-state machine and the value, to the value list for the merged machine state;

for each merged machine state with a corresponding first state of the augmented finite-state machine and a corresponding second state of the finite-state machine of the counter, for each character in transitions from both the first and the second states, forming a transition from the merged machine state, with destination of the transition being a state of the merged machine corresponding to the states of the augmented finite-state machine and the finite-state machine of the counter that are the destinations of the transitions from the first and the second states;

for each merged machine state with a corresponding third state of the augmented finite-state machine and a corresponding fourth state of the finite-state machine, of the counter, for each character in a transition from only one of the third and the fourth states, forming a transition from the merged machine state, with destination of the transition being a state of the merged machine corresponding to the state of the augmented finite-state machine or the finite-state machine of the counter that is the destination of the transition from the third or the fourth state and the machine without the transition from the third or the fourth state having halted; and

for each merged machine state with a corresponding fifth state of the augmented finite-state machine or a corresponding sixth state of the finite-state machine of the counter but not both, for each character in a transition from the fifth or the sixth state, forming a transition from the merged machine, with destination of the transition being a state of the merged machine corresponding to the state of the augmented finite-state machine or the finite-state machine of the counter that is the destination of the transition from the fifth or the sixth state and the machine without the transition from the fifth or the sixth state having halted.

5. **(Currently Amended)** A method for adding a pattern that consists of a single sequence of characters and a corresponding pattern value, from a counter to an augmented finite-state machine, said method comprising computer-implemented steps of:

providing the pattern;

providing the corresponding pattern value;

providing the augmented finite-state machine having a plurality of machine states and representing a plurality of single-counter finite-state machines each representing a different one of a plurality of counters and wherein at least one state of the augmented finite-state machine each corresponds to a multiplicity of states each of a different one of said single-counter finite-state machines;

advancing through the machine states by applying the machine to the sequence of characters as a text;

if the machine would halt when applied to the sequence of characters as a text, then adding states and transitions to the machine to prevent halting;

forbearing from the adding if the machine would not halt when applied to the sequence of characters as a text;

for a final state that would be reached by the machine supplemented with the added states and transitions, forming a state value list if the final state lacks a state value list, forbearing from forming a state value list if the final state has a state value list, and adding to the state value list a reference to the counter and the pattern wherein at least one of the state value lists indicates a value for at least two of the plurality of counters; and

updating the final state of the machine with the state value list.

**6. (Previously Presented)** A method for constructing a multi-counter finite-state machine augmented with state value lists, said method comprising the computer-implemented steps of:

providing by computer an empty augmented finite-state machine that has only a start state, with no transitions and no value list;

accumulating by computer a finite-state machine of each counter of the multi-counter that corresponds to one or more pattern-amount pairs into the augmented finite-state machine to form a merged machine, including

forming states for the merged machine that correspond to pairs of states that can be reached by starting the finite-state machine of a counter of the multi-counter and the augmented finite-state machine in their start states and applying the finite-state machine of the counter and the augmented finite-state machine to a text in unison, with the finite-state machine of the counter and the augmented finite-state machine advancing through each text character simultaneously;

forming states for the merged machine that correspond to one of the finite-state machine of the counter and the augmented finite-state machine having halted while another of the finite-

state machine of the counter and the augmented finite-state machine continues to advance through the text;

for each merged machine state, if there is a corresponding state of the augmented finite-state machine of the counter and it has a value list, then copying the value list to form the value list for the merged machine state;

for each merged machine state, if there is a corresponding state of the finite-state machine of the counter, it has a value, and the merged machine state has no value list, then forming a new empty value list for the merged machine state;

for each merged machine state, if there is the corresponding state of the finite-state machine of the counter and it has a value, then adding a reference to the counter corresponding to the finite-state machine and the value, to the value list for the merged machine state;

for each merged machine state with a corresponding first state of the augmented finite-state machine and a corresponding second state of the finite-state machine of the counter, for each character in transitions from both the first and the second states, forming a transition from the merged machine state, with destination of the transition being a state of the merged machine corresponding to the states of the augmented finite-state machine and the finite-state machine of the counter that are the destinations of the transitions from the first and the second states;

for each merged machine state with a corresponding third state of the augmented finite-state machine and a corresponding fourth state of the finite-state machine, of the counter, for each character in a transition from only one of the third and the fourth states, forming a transition from the merged machine state, with destination of the transition being a state of the merged machine corresponding to the state of the augmented finite-state machine or the finite-state machine of the counter that is the destination of the transition from the third or the fourth state and the machine without the transition from the third or the fourth state having halted; and

for each merged machine state with a corresponding fifth state of the augmented finite-state machine or a corresponding sixth state of the finite-state machine of the counter but not both, for each character in a transition from the fifth or the sixth state, forming a transition from the merged machine state, with destination of the transition being a state of the merged machine corresponding to the state of the augmented finite-state machine or the finite-state machine of the counter that is the destination of the transition from the fifth or the sixth state and the machine without the transition from the fifth or the sixth state having halted.